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Status Update: 12 Actions for Change

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***Environmental Advisory Board
6 December 2006***

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Hurricane Protection Decision Chronology (HPDC)

Purpose & Scope

- Document chronological record of decision making for Lake Pontchartrain & Vicinity Hurricane Protection Project (LP&VHPP)
 - Sequence of planning, economic, policy, legislative, institutional & financial decisions that resulted in system in place pre-Katrina
- Intended to complement engineering performance focus of IPET, which provided critical answers to questions about what happened to the system during Katrina
- Along with IPET, expected to inform corporate institutional actions such as the USACE "12 Actions for Change" Initiative

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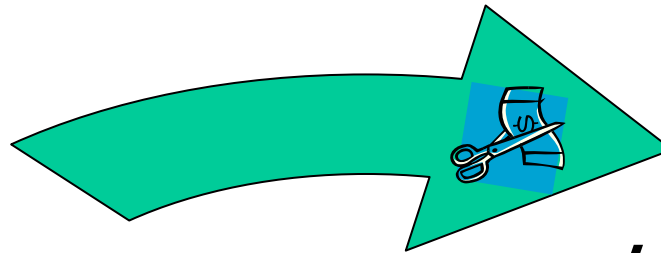
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HPDC Findings: Key Decision Influences

Tyranny of Incremental Decisions



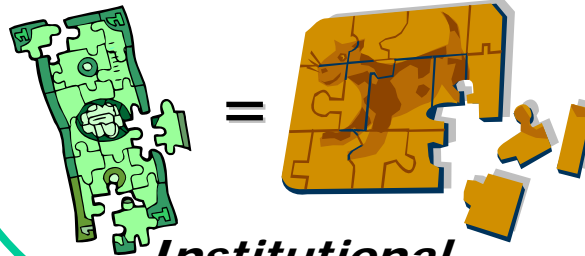
***Loss of Vision for
an Integrated
System***



***Lack of Dynamic Use
of New Information***

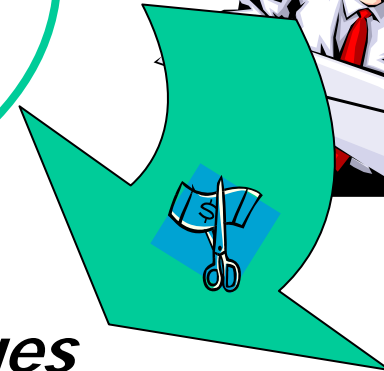


*Shared Sensitivity
to Cost Concerns*



***Institutional
Response***

***Organizational
Decision-Making Issues***



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Status Update on 12 Actions

- Chief announces 12 Actions for change 24 August 2006
- IPET, HPDC, and other external input led to development of the 12 Actions for Change
- Interdisciplinary working group drafting Program Management Plan
 - Order-of-Magnitude cost estimate developed
 - Draft scope and products developed
- Preliminary briefings to seek outside input given to OMB, Congressional Committee staffs, National Academy of Public Administration, and The Nature Conservancy

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Strategy for Changing the Corps of Engineers

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IPET

HPDC

12 Actions for Change



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GOALS

- Quickly (FY07-FY12) incorporate lessons learned from Hurricane Katrina to reduce risk and better serve the public.
- The 12 Actions will change the future direction of the Corps.
- These changes within the Corps will be self-sustaining.



12 Actions for Change

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1. Employ an Integrated, Comprehensive Systems-Based Approach

- Shift the focus from isolated, individual projects to interdependent groups of projects.
- Shift the focus from local solutions for immediate problems to regional solutions for longer term problems with broader, more diverse ramifications.
- Shift to interdisciplinary cross-functional teams.
- Upgrade and modify our methods, tools and attitudes to make these shifts effective. Conduct pilot tests that implement and refine these shifts.

Safe, reliable projects working together as a system with increased economic and environmental benefits.

2. Employ Risk-based Concepts in Planning, Design, Construction, Operations and Major Maintenance

- Shift the investment from a single focus on “What can go wrong?” to “What can go wrong?” “How likely is it to occur?” and “What are the consequences?”
- Develop methods, tools, and guidance for performing and using risk and reliability assessments that match the complexity and frequency of the assessments. Conduct pilot tests.

Flood risk is reduced through balanced structural and floodplain and coastal zone management investments.

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3. Continuously Reassess and Update Policy for Program Development, Planning Guidance, Design and Construction Standards

- Implement an immediate review and update of planning and engineering guidance, then perform comprehensive updates at a minimum of every 5 years.
- All guidance should be revised and maintained to reflect state of the art in planning, design, and construction of water resource systems

Up-to-date technology and methods result in safe, reliable systems with greater economic and environmental benefits.

4. Dynamic Independent Review

- Change to a system perspective that includes assessment of incremental changes over the system life cycle.
- Require external peer review of complex, costly, and controversial systems to identify, explain, and comment upon the soundness of assumptions, conditions, models and methods that underlie the economic, engineering, and environmental analyses.

Independent reviews assure safety, increase economic and environmental benefits, improve cost estimates, and broaden public acceptance.

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5. Employ Adaptive Planning and Engineering Systems

- Recognize that dynamic conditions and nonlinear processes of nature can place sudden or insidious demands on our systems at any time during their life cycles:
 - Climate variability
 - Sea level rise
 - Subsidence
 - Seismic
 - Geomorphological changes
 - Development-induced changes
- Be flexible and adapt to these changes by incorporating new information and knowledge throughout the life cycle to ensure satisfactory system safety and performance

Provide flexible systems that incorporate adaptive management.

6. Focus on Sustainability

- The environment should be an integral component of the system performance (the concept of the working coast).
- Integration of asset management and the USACE Environmental Operating Principles (EOPs) into the life cycle of USACE infrastructure

Sustainable systems are safe, reliable, flexible, and decrease costs and conserve natural resources.

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7. Review and Inspect Completed Works

- Change from reconnaissance level project inspections to comprehensive system risk assessments of completed works.
- More effective technology transfer from research and development activities to support in-depth assessments and to improve existing guidance

Comprehensive assessments result in safe, reliable, adaptable, and sustainable systems.

8. Assess and Modify Organizational Behavior

- Balance competing interests so that the public safety is held paramount in organizational decision-making.
- Critical assessment and modification of organizational behavior to restore the public's trust

Require professionalism and accountability in organizational behavior at all levels.



9. Effectively Communicate Risks

- We need to effectively communicate residual risk to people, property, or the environment remaining when flood damage reduction systems are in place.
- A fundamental communication problem is that level of protection gradually evolves in the public's mind to a guarantee of absolute safety. This misconception must be prevented through simple, clear communication about the risks borne by the public for larger flood events and the residual risks to life safety.

Clearly and simply communicate residual risks affecting the public, both internally and externally.

10. Establish Public Involvement Risk Reduction Strategies

- Require public involvement, with special emphasis on those who will bear the risk, in selecting the proper combination of structural, nonstructural, zoning, and emergency response components in the flood risk reduction system
- Increase efforts in educating local governments on residual risk and the increased risk from land development that is not consistent with “flood wise” behavior

Directly involve the public bearing the risk in all decisions.



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11. Manage and Enhance Technical Expertise and Professionalism

- Ensure that the selection process balances technical expertise and experience with management and leadership skills.
- Rebuild public confidence in our ability to provide safe, reliable, and resilient water resource systems that fully integrate engineering and ecosystem restoration.
- Recruit, develop, and retain the best possible staff and take steps to become an employer of choice for the best and brightest students.

Build confidence in the Corps' capability to provide safe, reliable, adaptable, and sustainable systems.

12. Invest in Research

- Target research investment in four key areas: risk and reliability engineering and planning, infrastructure safety and sustainability, scaleable coastal storm and hydrologic engineering modeling capability, and full integration of ecosystems into flood risk reduction systems.
- Infuse R&D advancements into practice based on a balanced investment strategy between basic and applied research and demonstrations.

Effectively infuse R&D knowledge into practice to provide safe, reliable, adaptable, and sustainable systems.



Strong Linkage Table

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Action Items	1	2	3	4	5	6	7	8	9	10	11	12
1. Employ an Integrated Comprehensive Systems-Based Approach		X		X	X	X	X	X			X	X
2. Employ Risk-Based Concepts in Planning, Design, Construction, and Major Maintenance	X		X	X	X	X	X	X	X	X	X	X
3. Continuously Reassess and Update Policy for Program Development, Planning Guidance, Design and Construction Standards	X	X		X	X	X	X	X			X	X
4. Dynamic Independent Review	X	X						X				
5. Employ Adaptive Planning and Engineering Systems	X	X	X	X		X		X			X	X
6. Focus on Sustainability	X	X	X		X		X	X			X	X
7. Review and Inspect Completed Works	X	X	X		X			X	X	X	X	X
8. Assess and Modify Organizational Behavior	X	X			X		X		X	X	X	
9. Effectively Communicate Risk	X	X					X	X		X		
10. Establish Public Involvement Risk Reduction Strategies	X	X					X	X	X			
11. Manage and Enhance Technical Expertise and Professionalism	X	X			X	X	X	X	X	X		X
12. Invest in Research and Development	X	X			X	X	X	X			X	

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Planned FY 06 and FY07 Tasks

- FY06 ongoing tasks
 - IPET and HPDC activities
 - National levee database
 - Developing levee assessment methodology
 - Collaboration with FEMA for levee certification and to better identify flood hazard areas
 - Update policy and guidance (~ \$1.4M)
 - GI-funded R&D system-wide program (~ \$ 5.7M)
- FY07
 - Initiated
 - Risk informed planning (~ \$1.0M)
 - Increased Guidance Update Maintenance Program (~\$1.4M)
 - Finalize levee assessment method and begin assessments
 - Reprioritized existing ICW funding (15%)
 - Consider reprioritizing GI R&D to emphasize public safety
 - Consider refocusing training

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Summary

- The Corps has identified problems that warrant redirection.
 - A budget for out-years is being developed.
 - Our draft outline for making these changes show that our FY07 priorities must be realigned and resourced.
- PgMP and Implementation Team are being developed.
- After 3-5 years, each of the 12 Actions will be assimilated into the Corps culture; no additional funding will be needed.
- The 12 Actions will improve our Nation's infrastructure and public safety through collaboration and integration of skills, resources, and programs within the Corps and working with the entire nation.